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ON

COMBINED EXTERNAL AND INTERNAL VERSION.

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ON

COMBINED EXTERNAL AND INTERNAL

VERSION.

COLLEGE OF PHYSICIANS CANCELLED

BY

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PREFACE.

The subject of the present memoir was originally brought forward in the 'Lancet,' in 1860, and before the Obstetrical Society of London, in 1863; and though it is partly based upon the latter communication, yet a not inconsiderable part has been re-written, new cases in illustration added, and the whole matter brought up to the present time. It has been the endeavour of the author to make it as free as possible from unnecessary remarks, leaving the details usual in ordinary practice to be supplied by the experience of the reader, and any unusual circumstance, which might possibly occur in a case, to be combated by the good sense of the attendant upon the principles here laid down.

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ON COMBINED

EXTERNAL AND INTERNAL VERSION.

CHAPTER I.

INTRODUCTION.

The relative preference of the use of the hands to that of instruments in facilitating or accomplishing delivery has varied much at different epochs of the obstetric art. From all antiquity, till the introduction of the vectis in the sixteenth, and of the forceps in the early part of the seventeenth century, the only mode, when the natural powers failed, of delivering a live child presenting by vertex was by the operation of turning, the alternative in case of failure being the opening or breaking up of the head of the fœtus. As this latter practice was considered very repugnant to the feelings of all concerned it was avoided as much as possible (frequently for the safety of the mother till too late), and turning was much more often resorted to than it has been since. And there can be no doubt, from recent researches of Dr. Simpson and others, confirmed by my own experience in a certain group of cases, and that not an inconsiderable one, that is, where there is not too great a discordance between the fœtal head and the maternal

passages, and where the head has not descended too far into the cavity of the pelvis to prevent the operation, that the results of this practice must have been very satisfactory. This treatment, however, was much interfered with, and the cultivation of the use of the hand was much neglected when the vectis, and more particularly the forceps, were introduced. The great facilities thus given the practitioner in delivering the head, and the marvellous advantages, apparent to every one, over the perforator and hook, especially in cases where turning was impossible, the comparative ease with which they could be used, and the moderate scientific knowledge required in their employment, gave such an impetus to their adoption, that manual delivery fell far into the background, and the hands of the man-midwife, in difficult cases, were seldom used except in the employment of the forceps, vectis, or perforator. So much had the advantages of version been overlooked in the next generation that the rota observed in cases of obstruction was vectis, forceps, and these failing, then the perforator.

This state of practice continued down far towards the middle of the present century, and even yet is adhered to by some obstetric practitioners.

Happily, however, we can offer the fœtus another chance for its life, and can place turning before the perforator. By some practitioners turning is placed before the forceps ; for myself I prefer, as a rule, the forceps first, though much depends on the relative size of the head and pelvic brim, and on the distance it has entered the passages.

For this reason it probably happened that no alteration in the ancient mode of turning was made till the commencement of the present century. The well-known plan it is needless to describe ; it will be sufficient to point out that, whether podalic or cephalic version was desired, the hand

was always passed within the uterus, and the part which it was desired should present was brought down in its grasp. This was, of course, a simple mechanical process, requiring but a moderate knowledge; it was direct in action, and no doubt adaptable to, as well as efficacious in, the majority of cases. But no assistance was sought from the other hand excepting that of steadying and supporting the fœtus and uterus against the pressure of the hand within. That pressure through the abdominal and uterine walls could effect any definite revolution of the fœtus was unknown, till Wigand* pointed out in an admirable essay that the child could be turned from the transverse positions and its varieties by the use of the outer hand alone, or as it is expressed, by "external manipulation." His plan was this: after ascertaining by vaginal examination the exact position of the fœtus, his next object was to make that part present which was nearest the os uteri. He noticed, which is indeed the fact, that in the greater number of the so-called transverse presentations, the child laid obliquely, not rigidly transverse; that either the head or the breech is nearer the os. He had discovered that pressure upon the exterior would make the fœtus move to a considerable extent; this fact he adapted to the rectification of the abnormal position of the fœtus. He found that by pressing on both poles of the child in opposite directions he could bring that end which was nearest into the os uteri. Thus, as the head was nearest the os in the majority of cases, he more often employed cephalic version. He only employed the inner hand to guide and receive the head or breech into the os. As a

* Wigand, T. H., "Von einigen ausseren Handgriffen, wodurch man, unter der Geburt, die regelwidrigen Lagen der Frucht verbessern kann," 'Wigand's und Gumfrecht's Hamburg Mag.,' 1807; translated into French by Dr. F. J. Herrgott. In the Library of the College of Surgeons of England.

motor power it does not appear that he used it; indeed, he particularly directs attention to *outer* manipulations *alone*. This it is important to bear in mind, because in this point consists the difference between being able *merely to rectify abnormal presentations, and being able to accomplish version in any manner, whether partial or complete, podalic or cephalic*. Even where he employed cephalic version (and here the plan to be pointed out in this treatise the nearest corresponds to Wigand's), he did not push back the presenting part in the direction of the feet; and thus, as will be hereafter shown, he was unaware of the advantage to be gained by this procedure.

To compensate in a measure for this, he lays particular stress upon the mode of placing the patient, first to one side and then to the other, in order that gravitation may assist the outer pressure; and thus the process was tedious and troublesome to the patient.

He also took advantage of the action of the labour pains to assist in producing and afterwards to confirm the permanence of the new fœtal position. These two points I have not found necessary, indeed, I consider the uterine pains more or less an impediment.

The perusal of his essay will shew that he never produced complete version, and thus the most important cases requiring version—as placenta prævia, in coarctation of the brim, &c.—could not be treated by him; indeed, he expressly mentions that his plan was not applicable to cases of hæmorrhage from any portion of the sexual passages, in convulsion, in prolapsus of the funis, where he recommends the old plan of version for quick delivery by the forceps, in convulsions of the fœtus, &c.

I cannot complete the notice of Wigand's essay without expressing my deep appreciation of the value of the work

and the talent displayed in it. I had not seen it at the time of reading my former papers * on the subject, but had depended upon the abstracts found in English works on midwifery; these give but a very limited idea of the author's powers of observation. One point in particular he dwells upon, which I had already endeavoured to make prominent in my former papers, namely, that after turning for malpositions, and in all cases not requiring instant delivery after the version is effected, that the labour should not be hurried, but left to be completed by the natural powers, or at the most only gently assisted. This will be dwelt upon more at length hereafter.

Wigand had some followers of his plan in Germany, such as Mattei, Stoltz, Martin, Hohl, and Carl Esterle, each of whom has published many cases in which the plan has proved successful. These appear to have followed Wigand closely. The last-named professor (whose loss we have to deplore in consequence of a poisoned wound received in a severe midwifery operation) employed it some weeks before labour to rectify positions which he had detected as abnormal by careful external exploration. Martin so far limits himself in its use that he insists—1st. That immediate delivery be not called for. 2nd. That there be a capacious pelvis. 3rd. No active pains. 4th. That the child be living. Now it is evident that these conditions cannot be granted if we desire to employ it in the midst of labour, or in cases of urgency.

Again, to perform complete version entirely from the outside requires considerable opportunities of practice, more than falls ordinarily to the fate of practitioners; and even in the most skilful and practised hands it has much of uncertainty; and what is more, for practical purposes it will

* 'Lancet,' July 14 and 24, 1860. 'Obstet. Trans.,' vol. v, p. 219.

fail us when we most stand in need of it, namely, in actual labour; for few medical men have the opportunity, in private or outdoor practice, of carefully examining the condition of the presentation before labour has commenced; and even did they possess every facility it would be very impracticable, and I may say to a certain extent unnecessary; for it is evident to any one who has taken the trouble to examine the position of the child before birth, that it is frequently altering its position in utero, more commonly oscillating between the transverse and cephalic; and that it is not till the early pains set in that its presentation is finally fixed.

This whole external plan appears to have prevailed abroad to the present day, but our own countrymen had made some progress in the mode of partial turning in transverse presentations. I am not aware of any author who describes it before Dr. Robert Lee in his 'Clinical Midwifery,' 1st edition. I am, however, told by a pupil of his that the plan was practised by the late Dr. Collins of Dublin; however, no mention is made of the plan in his 'Practical Treatise,' published in 1836. Therefore it is to Dr. Lee that we must attribute the first mention of the following plan: When the os was so small as only to allow the introduction of one or two fingers, these were employed to push the head to one side, and then those parts which successively presented also onward in the direction of its head; thus, ultimately, the feet were made to present or brought within reach of the fingers, and so secured.

Dr. Lee also pointed out another fact which seems to have been overlooked, namely, that when the child was placed transversely, its knee was within a finger's length of the os uteri, and thus in some transverse presentations it is not very difficult to hook down the knee. However, as had

been before shewn by Wigand, the child seldom lays directly transversely, but inclines more or less to the oblique. In the majority of cases of transverse presentation, therefore, the child requires to be placed transversely by the aid of art.

From the few cases recorded it was only occasionally possible for Dr. Lee to push the child round so as to effect version, for it was evidently attended with much uncertainty; and, as it seems to me, with considerable risk of inducing a transverse presentation were the operator not successful in completing the turning.

Imperfect as this mode necessarily was, yet it was an advance of much importance, although it does not seem to have gained the attention of obstetricians generally. The only author who, as far as I am aware of, makes mention of it is Dr. Tyler Smith, in a paper on the "Abolition of Craniotomy," 'Obst. Trans.,' Vol. I, p. 43, wherein he speaks favorably of it.

However, anything which gave the practitioner some power of action was to be earnestly welcomed; anything better than to stand with folded arms, incapable of rendering assistance for hours and even days, every moment of which might be carrying the sinking and suffering patient nearer to the grave.

It is a curious fact, however, that the memoir of Wigand attracted but little attention out of his own country. In our own, in some of the text books it has been noticed, and also those of his followers, but I believe no one author has done more than that; none have spoken from their own experience on the practicability of the mode. With regard to the French, the complete translation of Wigand, above referred to, appeared in Paris and Strasbourg in 1857; since that it has been noticed by Caseaux in 1862, in his

last edition of 'Systematic Midwifery;' besides these a few papers have occasionally appeared in the French periodicals.

It is, I repeat, much to be wondered at that so little attention has been paid to so manifest an addition to the obstetric art. This may partly be explained by the difficulty and uncertainty of performing it, especially in the hands of those not very conversant with the operation. It will be noticed that almost all the Germans who have practised it were men of great experience. It does not seem to have ever been adapted for general use, although it cannot be gathered from Wigand that he considered his new plan difficult.

The time required to produce and secure the permanence of the new position, did much, no doubt, to impede its reception. Active direct efforts are more seductive to most minds, and must have been especially so to the vigorous obstetricians of Wigand's time.

Perhaps as powerful a retarding influence as any is the fact that the plan was limited to a small number of cases; to its inability to produce complete version, and, therefore, as a means of hastening labour, and of giving us the command of it in cases of emergency; it was of no avail in a large number for which version is applied, and from this cause the mode of performing it was not cultivated by the mass of practitioners.

These three features in Wigand's method no doubt explain, in a considerable measure, the reason of the tardiness of its reception and of its extension. Be this as it may, it will be the object of the following pages to endeavour to point out and describe a mode of turning, which, based on one hand upon the knowledge of the capability of turning the child from the outside alone, and on the other of moving it from the inside alone, is able to be employed,

in the majority of cases, with a degree of certainty and celerity second not even to the old method, and far surpassing Wigand's or the "two finger" mode mentioned by Dr. R. Lee; at the same time far exceeding these two plans in extensive application, combining the power of rectification of abnormal presentations with that of complete version, but differing from all the other plans in producing cephalic or podalic version at will, in many cases alternately or at least successively, and capable of application as soon as the os uteri can admit one or two fingers; some other advantages will also be pointed out which do not depend directly upon the act of turning.

This subject was first brought before the profession in the 'Lancet' of July 14 and 24th, 1860, also of February 9, 1861; and again in an extended form in vol. v of 'Obs. Trans.'

CHAPTER II.

PRINCIPLES UPON WHICH COMBINED EXTERNAL AND INTERNAL VERSION IS FOUNDED.

In order that it may be seen that success is not a mere matter of chance, but that there is every prospect of accomplishing version by these means, I shall proceed more minutely to explain the principles upon which the plan is based.

The FIRST *point which must be borne in mind is, that the child in the uterus is easily moved about by any impetus acting from without.* Upon this fact indeed, does version from the outside alone (Wigand's), and by the combined external and internal hands, depend.

The *full* recognition of it is essential to the satisfactory accomplishment of these forms of version, and to the careful study of it the reader's attention is particularly called. By those who have once paid attention to this question it might be thought superfluous to dwell upon it, but experience has taught me that in its fulness it has yet to be acknowledged. It can readily be observed in any pregnant woman at nearly full term. Place your hand on the abdomen and press upon any prominent part of the child, you will find it recede till you can considerably, if not completely, alter its position.

This mobility is of course most complete when the membranes are perfect; it is less so when the waters have partially escaped; but it is an error to suppose that there is little or no movement when they have wholly passed off. The motion in this latter case is a *gliding round* within the slippery membranes; while in the first state it is a *floating* in the fluid. The condition in which the mobility of the fœtus is most curtailed is when the waters have escaped completely and for a considerable time, and an irritable uterus tightly clamped around. Relieve that irritability by chloroform or otherwise, and you will find that the absence of the waters has not destroyed the mobility of the fœtus within the uterus.

The SECOND *point is this—that when the child is placed transversely in the uterus, the knee in its natural position, at the umbilical region of the child, is nearly immediately over the os uteri, and therefore within a finger's length of it; and that also in the natural position the foot is close to the breech, and will be found upon it when that end of the child presents.* Hence should we succeed by any means to place the fœtus transversely in the uterus, the principal difficulty in version is overcome.

But there is a THIRD *fact, which it is important to recognise; namely, that when the child is transversely placed in the uterus, that is, with its long axis at right angles to that of the uterus, there is a great tendency for it to assume a position in which their long axes will become coincident;* or in other words, when the child is transversely placed, a very slight force will be sufficient to determine which direction the head shall take, either back to the os or upwards to the fundus. This is very apparent in practice, and its reason is palpable.

CHAPTER III.

MODE OF OPERATING.

Podalic Version.

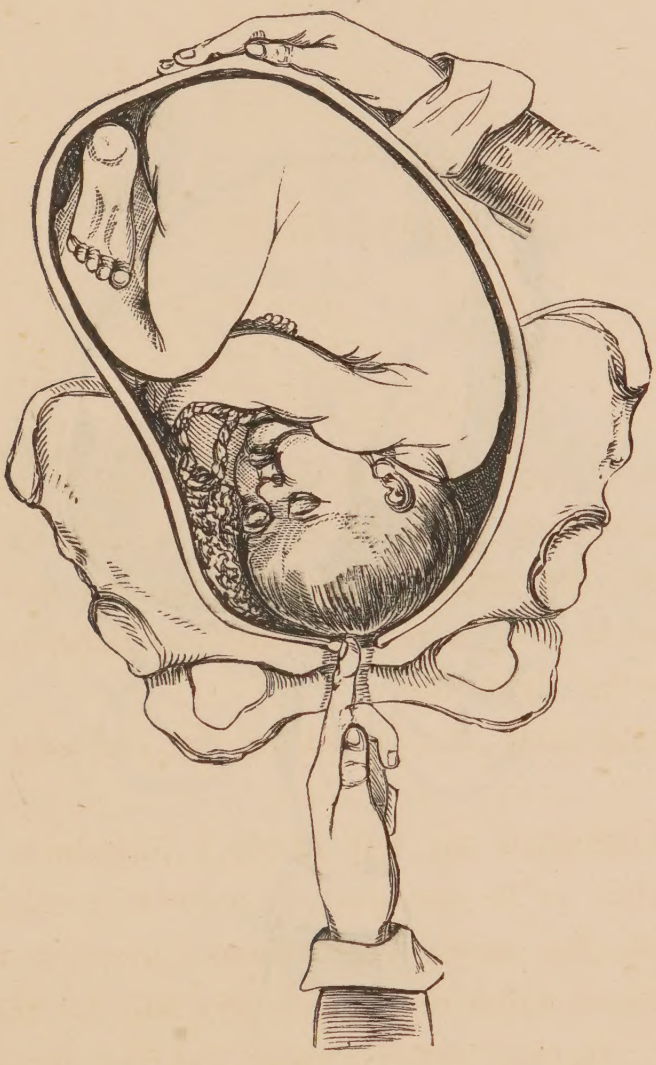
I WILL now proceed to describe the mode by which I effect podalic version. (See Cases 1—16). We will suppose a case where everything is natural; the os uteri dilated to admit one or two fingers, membranes perfect, and the face towards the right side.

The patient may be placed in the ordinary obstetric position.

Having lubricated my left hand, I introduce it as far into the vagina as is necessary in order to reach a finger's length within the cervix—sometimes it requires the whole hand, sometimes three or four fingers will be sufficient in the vagina. Having clearly made out the head and its direction, whether to one side or other of the os uteri, I place my right hand on the abdomen of the patient towards the fundus; I then endeavour to make out the breech, which is seldom a difficult matter. The external hand then presses gently but firmly the breech to the right side; as it recedes, so the hand follows it either by gentle palpitation, or by a kind of gliding movement over the integuments, while at the same time the other hand pushes up

the head in the opposite direction, so as to raise it above the brim (Fig. 1).

Fig. 1.



It may here be mentioned that when the head has descended a considerable distance into the pelvic cavity or more than half way through the os uteri, it is scarcely possible to lift it above brim, especially if the uterus be active.

When the breech has arrived at about the transverse diameter of uterus, the head will have cleared the brim,

and the shoulder will be opposite the os (Fig. 2). That is pushed on in like manner at the head, and after a little

Fig. 2.

further depression of the breech from the outside, the knee touches the finger and can be hooked down by it (Fig. 3). It very frequently happens when the membranes are perfect, that as soon as the shoulder is felt, the breech and foot come to the os in a moment, in consequence of the tendency of the uterus to bring the long axis of the child coincident with that of its own.

Should it therefore be difficult to hook down the knee, depress the breech still more, and it will be almost always the case that the foot will be at hand.

Fig. 3.

It will sometimes render turning more easy if, as soon as the head is above the brim, we pass the outside hand beneath it, and push it up from the outside alternately with the depression of the breech. All this can generally be performed in a much less time than I have taken to describe it, although in some it requires gentle, firm, and steady perseverance, with such a supply of patience as is always demanded in obstetric operations.

If the os will only admit one finger, and the foot cannot be brought through in consequence, it can yet be retained at the os by pressing it with that finger against the inner surface of the os (see Case 11); the most convenient part being against the anterior part, because the pubes will assist in supporting the pressure, while at the same time, in most persons, unless very stout, the hand pressing externally above the pubes is capable of assisting us materially in retaining the leg in that position, and securing the altered change, ready for us to take advantage of it, should the case so require, as soon as the os dilates sufficiently; and the mere retention of the leg here is of considerable value, for, in cases of turning, even when we cannot effect turning immediately after having seized one of the limbs, yet the holding on to that part, and thereby fixing it, ultimately produces such an improved relationship between the uterus and its contents, that the after operations succeed more easily. This is doubtless partly by the action of the uterus and partly by a gentle and insensible traction on the part at the same time.

Should the child face towards the left side, the only difference required in operating is, that the breech be pressed towards the left side and the head to the right.

Supposing the position cannot be distinctly made out, in which direction will it be advisable to press? I would then say, provided the head is placed considerably off the centre of the os, press the head to the side to which it inclines, and the breech in the opposite.

But should the head be tolerably central, and we are also unable to make out the position, what have we to guide us in order that we may press in the best direction?

This, at first sight, might appear a difficult question to answer, but you will find much assistance from following considerations.

If we take the relative frequency of the occurrence where the back is towards the left side (first and fourth presentations), compared with other presentations, we shall find that, according to Naegele's computation, it will occur in about 75 per cent. Other observers range from 65 to 80 per cent., consequently if we press the breech towards the right side and the head to the left, we shall be acting in the best direction in these proportions.

But after all it is not so very important practically, for even should the child have been moved in the direction to which the back presents, yet when the child has assumed the transverse position, one of the sides will incline more or less to the os uteri, and thereby bring the knee within fingers' reach of that opening. But though it may not be absolutely necessary to know the precise direction of the face, yet it is, of course, very desirable that it should be made out in every case where possible.

And here will be the proper place to make some remarks concerning the influence the uterine contractions have upon our efforts in this form of version. It will be seen on reference to the list of impediments in accomplishing it (see p. 33), that when the uterus is tightly contracted around the child, there is very little chance of our succeeding. Of course version is easiest when there are no pains, and consequently the intervals between the pains are the fittest for employing our efforts, remaining at rest when they come on. When the patient is highly irritable, and the pains forcing and frequent, the difficulty is very great, but there are numerous states between this and their complete absence where version may be performed without difficulty between the contractions. It is of course difficult to lay down any absolute rule; perhaps the surest guide is the frequency of the pains. If they occur with scarcely an interval it will be very diffi-

cult to diminish the uterine irritability. But as one of the chief advantages of this mode of turning rests on its capability of being employed at an earlier period than the older forms, the uterus will generally be found in a state which will not interfere with its practical application.

When the pains are very severe they have a tendency to undo what has been done during their interval, and this untoward effect is increased by voluntary forcing. Still in these cases version may be managed in the intervals, because, as the operation does not require much time provided a fair amount of relaxation occur, we may alter the position of the child before the next pain.

In regard to *transverse* presentations, it has already been pointed out (p. 8.) that in their early stage it is really seldom necessary to employ more than one or two fingers within the os, in order to hook down the knee; should that, however, not be the case, then the best manner of proceeding, if we determine upon *podalic* version, will be simply to depress the breech from the exterior, as has already been described; if further assistance be required to produce that change, to push on the elbow as before mentioned, and the head up from the outside. This latter procedure is seldom required while the membranes are perfect.

It may here be remarked that the use of the external hand in lifting the head from just above the pubes towards the fundus is very great, and tends to facilitate remarkably the operation of turning, even in those cases in which the old plan is used. In those cases where the descent of the feet and breech is found difficult, the head, easily recognised from the outside, can be pressed upwards if necessary to the very fundus. When this is accomplished the difficulty is generally over.

Transverse presentation in its early stage, commonly

speaking, is the easiest managed of any case requiring version, and in it the depression of the breech from the outside is so effective that, as soon as the abnormal condition is made out, we possess the power of rectifying it; and I think I am justified in saying that in such cases the method of introducing the whole hand need very seldom indeed be resorted to, for the simple depression of the breech will, in almost all cases, bring the knee close to the os uteri. This has been well dwelt upon by Wigand, and constitutes one variation of his mode. However, unless the breech was nearer the os uteri than the head, he recommended *cephalic* version, and as in the majority of cases the head in transverse presentations is nearer the os than the breech, it follows that he generally adopted cephalic version. If in podalic version from outside alone the breech did not descend, it does not appear from his memoir that he employed the other hand inside to assist the exterior one by pushing on the arm or shoulder of the fœtus in the direction of its head. Thus consequently he lost a motor power, the value of which is in most cases equal to that of the outer hand, and in many cases practically the chief agent in version.

But there are some forms of transverse presentation where it is exceedingly difficult to effect turning by the method I am describing. These are, where the child is more or less doubled upon itself; for instance, in a case where the arm is prolapsed outside the vulva, and the thorax jammed down into the cavity of the pelvis, while the head and breech are in the uterus—in these the uterus is tightly clamped round the child, rendering it next to impossible to move the breech by any external pressure down to the os. From my own experience, and from what we might expect from the nature of such cases, I think it advisable to

introduce the hand into the uterus in the ordinary manner.

At the same time, I can say that the bringing the breech down as far as it can be done before the hand is passed within will very frequently bring the breech so near that it requires the passage of only the hand within the os. In the worst cases much more advantage can be gained by the external depression of the breech than is generally supposed. The use of the external hands in these forms of transverse presentation has thus been alluded to by Dr. Simpson in the 'Obstetric Memoirs :'*—

"The external hand fixes the uterus and fœtus during the introduction of the internal one; it holds the fœtus *in situ* while we attempt to seize the necessary limb or limbs, or it assists in moving those parts, when required, towards the introduced hand; and it often aids us vastly in promoting the version of the child, after we have seized the part which we search for. Indeed, this power of assisting one hand with the other in different steps of the operation of turning form the principal reasons for introducing the left as the operating hand." I would go farther than this, and urge that the depression of the breech precede the introduction of the hand into the uterus, with the intention of diminishing, as much as possible, the portion of hand to be introduced.

Where the arm has not descended so low as I have supposed above, but yet has fairly come into the vagina, it will be advisable always to endeavour to return it on to the chest of the child, and then to push the child onward in the direction of the head, depressing from the outside the breech if we intend podalic version.

* 'Obstetric Memoirs,' 1856, page 638.

Cephalic Version.

And this brings me to the consideration of the manner in which *cephalic* presentation can be effected by the combined external and internal manipulations.

Perhaps it is in changing the position of the fœtus from the transverse, and its varieties to head presentation, that the advantage derived from the external hand is the most marked. Still here the use of the inner hand as a motive power may be very great. Before Wigand it was considered necessary to seize the head by the hand, and draw it into its place, pushing as much as possible the shoulder towards the direction of the feet. The difficulty of obtaining a good hold of the head, and of retaining it in its natural position, was a great reason why it has been seldom employed.

This, even at the present time,* has been described as the only method of cephalic version, and its dangers have been energetically pointed out. The dangers, however, must have been much overrated; it is doubtful whether there be any in ordinarily prudent hands, the chief objection being that the attempt often failed, and was thus useless.

But the following plan (see Cases 17—19) I can recommend as easy and as far as I have employed it, generally efficacious; and in it there is much which is similar to Wigand's mode. He however trusted to the outer hand chiefly, and does not appear to have used the inner hand more than to guide the head into the right position. This would be sufficient doubtless in many simple cases, especially at an early stage of labour; whereas in the more difficult, where the arm is down and the uterus active, it requires the inner motive power.

* See Appendix, p. 71.

We will suppose first of all a case where the uterus is not active, the liquor amnii not escaped, or only recently so, where the fœtal hand has not passed the os.

Introduce the left hand into vagina as in podalic version; place the right hand on the outside of abdomen, in order to make out the position of fœtus, and the direction of the head and feet. Should the shoulder, for instance, present, then push it with one or two fingers through the cervix in the direction of the feet. At the same time pressure by the outer hand should be exerted on the cephalic end of the child. This will bring down the head close to the os; then let the head be received upon the tips of the inside fingers.

The head will play like a ball between the two hands; it will be under their command, and can be placed in almost any part at will. Let the head then be placed over the os, taking care to rectify any tendency to face presentation. It is as well, if the breech will not rise to the fundus readily after the head is fairly in the os, to withdraw the hand from the vagina, and with it press up the breech from the exterior. The hand which is retaining gently the head from the outside should continue there for some little time, till the pains have ensured the retention of the child in its new position, by the adaptation of the uterine walls to its form.

Should the membranes be perfect it is advisable to rupture them as soon as the head is at the os uteri; during their flow and after, the head will move easily into its proper position.

The ease with which cephalic version was effected by these means in one of the cases to be mentioned was such, that only half a minute was required. But if any unseen circumstance oppose difficulty to cephalic version, it will still remain open to us to adopt podalic in the same case. All

that is required is to place the hand on the opposite end of the child, and depress it as has been already shown, pushing the head and shoulder from within; while the fingers within are ready to hook down a knee or foot. This took place in one of the cases about to be recited. (Case 19.)

From the opportunities I have had of judging I may lay it down as a good rule, that, in neck and transverse presentations, where we have no reason to hurry, and where all things seem otherwise favorable, we should first of all endeavour to induce cephalic presentation; and then, should there be any difficulty in accomplishing it, to change our plans to podalic, which merely requires, as just shown, the action to be reversed.

If in these malpresentations the fœtal hand protrude, it is even then quite possible to induce cephalic presentation, provided the thorax has not yet descended (as already mentioned. See Case 20). We must first, in this case, carefully replace the presenting hand into uterus, and then proceed as just indicated.

The best mode of replacing the arm is first to bend the forearm upon the arm in the vagina; the fœtal hand will then be close to the breast of the fœtus; by pushing gently the elbow the hand will pass over the front of the chest and thus be effectually reduced, making the case much more simple.

The advantages which accrue from the institution of cephalic presentation, in a case of labour without any other complication than that of malposition of the fœtus, is admitted by, I may say, all prudent practitioners, and the readiness with which it can in many such cases be effected by the above plan induces me strongly to recommend its adoption. Of course I mean with an ample pelvis, or small

head, for in many cases transverse presentation is the result of malformed brim.

I have not at present had an opportunity of changing a breech into cephalic presentation, but the same rules, altered to the nature of the case, will apply as in changing cephalic into breech, though no doubt there will be more difficulty in finding in which direction the child faces.

With regard to the first child of a twin case I have had no experience, excepting in one at the fourth month and a half of pregnancy. In this case (not included among the illustrative cases), a transverse was changed into cephalic presentation, in which direction it was born. This occurred without any difficulty whatever. The experience of this one case can scarcely be extended to that of full term; however, there is no doubt but that the pressure could be limited to the presenting child by observing whether the impulse given by the outside hand acted directly upon the presenting part, should it be so, then it would probably not be difficult to manage the case; should it, on the contrary, not produce any effect on the presentation, then it would be easy to change the position of the outer hand till the impulse was plainly perceived.

CHAPTER IV.

CASES SUITABLE TO THE EMPLOYMENT OF THE COMBINED METHOD.

If I have been able to carry the attention of my reader thus far, and if I have been able to bring before his mind the practicability of the operation, then I think I shall have but little difficulty in impressing upon him the benefits to be gained by a method which does not require the presence of the hand, which does not ask for more than two fingers in the uterus.

In malpresentations.—Whether we employ it for cephalic or podalic version, I need only mention the advantages of early turning in such cases as neck, shoulder, and transverse presentations and their varieties.

In convulsions.—It is scarcely needful to point out the benefits it gives us when early delivery is wished for, as in convulsions such as occurred in a case to be related. The introduction of the hand into uterus during convulsions, even when the os is dilated, is attended frequently with much risk to the integrity of the uterine walls, and is therefore to be avoided as much as possible.

In many cases of convulsions it is now in our power to turn without those risks, and at a time when the os is not

dilated sufficiently to admit the hand; by which means we can avail ourselves of its earliest dilatation, and can also assist it by gentle traction upon the leg, which will thus act as a dilator.

In small pelvis or other deformity, where it is determined to deliver by the foot, it is of much advantage to turn before the uterine pains are active. If therefore the os uteri be dilated first by the elastic bags (Case 15), version can be performed as soon as the cervix is of the size of half-a-crown. If labour has begun, it is of great assistance to bring the foot down as early as possible. (Case 14.)

In extreme depression, where it is necessary to turn the fœtus, it affords us opportunity of so doing with *much less shock* to the system as when the whole hand had to be carried to the fundus. This form of version is therefore especially adapted to cases of violent hæmorrhages, exhaustion from disease or any other cause.

In *placenta prævia,* again, I have found this plan peculiarly useful, as I have already shown in the 'Lancet,' and now adduce further examples. Those cases of this condition where the cervix is not larger than will admit a finger or two, and where the bleeding is still great, give the practitioner the greatest amount of anxiety possible. It is these cases which not long since compelled him to wait for hours whilst endeavouring to dilate the os; or to content himself by a firm plug in the vagina to press on the cervix while the head is attempted to be pressed on the placenta from within, by pushing down the fundus.

From my own experience in these cases, I have every reason to hope that in by far the greater number of cases it will be found to be the best method of treatment. It is highly important to remember that all we are required to do in a case of placenta prævia is to restrain the present

bleeding and to secure the patient against further loss. This is the object of all the various plans which have been devised. This point gained it is not necessary that the patient should be delivered hurriedly. There is no advantage gained by haste in any way; on the contrary, there is every reason to postpone delivery till the powers are restored, the os uteri dilated, and the uterine contractions sufficient to secure good subsequent contraction.

I believe that in nearly every case the bleeding will be found to be controlled by the drawing down the child after version so as to fill up the os uteri. I have never found any bleeding after this point has been gained. Where the child is already presenting by the foot, I have also found the bleeding effectually restrained by this procedure.

The plan I adopt in these cases is as follows:

If I can feel the membranes and find the head presenting, I then proceed as in an ordinary case before described. When the foot has arrived at the os, I rupture the membranes, draw the foot and leg through as far as they can descend without force. By exerting gentle traction with merely the weight of the arm, we have a firm plug on the bleeding part. I retain hold of the leg in this manner; and thus as the os expands, the leg by its conical form makes an excellent plug, as does also the breech when it has entered the os.

When this point is secured, most valuable time is at our command, and our endeavours should be devoted to restore the vital powers, weakened and in some cases almost annihilated by the previous loss. In extreme cases—I am sure most of my readers will agree with me—the worth of this period can scarcely be over estimated.

Labour pains are now waited for; and the case treated as is proper in breech and footling cases.

Generally, the pains arrive in an hour or two, but should they be delayed beyond this, it is permissible, should there be no very great depression of the powers, to give secale ; and here I again wish to urge the importance of not delivering the child with rapidity after the accomplishment of version, whether it be performed by the old or the combined method.* This remark applies particularly to these cases of placenta prævia, and more especially where the previous flooding has been severe. When so much of the child has passed through the cervix as its dilatation will allow of, a gentle traction on it, as above noticed—merely the weight of the arm—will, I believe, always restrain any further bleeding. The form of the child, being conical from the foot to the shoulders, adapts it admirably as a plug to the yielding os and lower part of the uterus, which it must be remembered would not then preserve its globular form, but assume more or less the form of the fœtus.

However, should there be reason to fear hæmorrhage was going on internally, then the delivery might be hastened; but I have in all the cases narrowly watched for any externally or internally, without having met with it. Such a state is of course possible, but I think it must be rare, and a little extra traction would in all probability stop it. If this be the case, what is the use of hastily delivering before the os is well dilated, and before the system has time to rally the effects of flooding and of the version? Many of the deaths following placenta prævia I believe may be fairly attributed to too rapid delivery. How much must the collapse be increased and the uterus injured by endeavouring to drag the head through the yet rigid os? Turn, and the danger is over, if you employ the child as a plug ; wait then for the pains, rally the powers in the interval, and let nature gently assisted complete the delivery.

* This was well insisted upon by Wigand.

As for the child, waiting for a reasonable time for the os to relax must necessarily be safer till the funis comes to be pressed upon, as is the rule in ordinary breech cases.

I believe also the power obtained by the mode of version I have just recommended, and the restraint of hæmorrhage thereby, will form a more satisfactory plan, at least as far as regards the child, than the detachment of the placenta recommended by Dr. Simpson in those cases, where only a finger or two can be passed into the os, and where the hæmorrhage has already been nearly fatal, and in which he feared to turn lest a fatal collapse should result. But by the above means the shock may be avoided and yet the child turned, the cervix plugged, and danger of hæmorrhage avoided.

But even were this not the case, there always appears to me an insuperable objection to the reception of Dr. Simpson's plan and of his explanation of it in their entirety for this reason, that the total separation of the placenta even when centrally inserted is impossible by the sweep of a finger or two within the os. The diameter of the placenta even when expelled is much greater than can be reached in this manner; and when it is remembered how much larger it is when attached to the uterus than when expelled, it will be not difficult to understand therefore how much more is it impossible to wholly detach it when it is not centrally placed. In all the cases of placenta prævia where I have had occasion to remove the placenta after the birth of fœtus I have found the upper edge reach nearly, if not quite, to the fundus. To fully appreciate the objection above stated it is urged that this treatment is applicable only to those cases where the cervix will not permit of the old method of delivery. True, but if the cervix be small then it is difficult to conceive the possibility

of completely detaching the placenta; on the contrary, should the os be large enough to reach the whole insertion of the placenta then it seems that it must be sufficiently enlarged to admit of version by the old method after a partial separation of the placenta on one side.

That this difficulty is in a great measure overcome by the plan I am advocating, will appear in the cases to be related hereafter. Indeed it will be found an exceptional case where, after separating the placenta a short way round the cervix and the membranes being reached, it will not be possible to apply it.

Where the placenta is centrally inserted or nearly so, then if the os be small it will doubtless be difficult to reach the membranes so as to feel the head, and to act upon it; but I believe it will be found that the detachment of the placenta for some little distance within the cervix will very generally facilitate its dilatation by setting it free from its constraint, a fact I have seen in many cases; besides this it is better and more scientific to do this intentionally than to allow the child to do the same during its descent. Should this however not succeed, and it be found impossible still to reach the edge of placenta, I believe that the dilatation of the cervix by the elastic bags of Dr. Keiller and Dr. Barnes, especially of the latter, will be found of very great service in dilating the os uteri to such an extent as to enable one to turn by the above-described method. The value of these bags is very great, and they give us a power of operating at a date far earlier than we ever possessed before. Dr. Barnes in particular has dwelt upon the advantages it gives in treating the undilated os in placenta prævia, and has described cases in illustration.

These cases of really central insertion are however very rare, and this may be readily perceived when we consider

the great chances against its occurrence, how small the os is even when expanded, in comparison to general area of the uterus. When the os is small and the placenta wholly over, it appears at first sight as a central insertion; it is however by no means necessarily in this position, and the cases are very infrequent, where if you detach the placenta all round by the sweep of a finger you cannot in one direction or another reach the membranes.

CHAPTER V.

ADVANTAGES AND DIFFICULTIES CONSIDERED.

I.—Advantages.

Many of the advantages to be gained by this mode of version will have been already gleaned from the foregoing, but the most prominent of them might be summed up under two heads—first, those of *avoidance*, secondly, those of *acquisition*.

(*a*) *Avoidance*.

1. We shall avoid the addition of the hand and perhaps of the arm to the uterine contents, with the present and chances of future irritation caused by it.

2. Entry of air into uterus.

3. Liability to ruptured uterus, the pressure being opposite to that of the ordinary method.

4. Much of the pain and distress felt in the ordinary plan.

5. The necessity of baring the arm, and perhaps the removal of the coat of the operator.

6. Much of the fatigue and distress felt by the operator by the pressure of the uterus during contractions.

7. The increase of collapse by the presence of the hand in cases of severe exhaustion.

I do not wish to lay any more weight upon these points than they deserve. The dangers of cautious turning by the old method are not so great as have been supposed, the unphilosophical deductions from the statistics of this operation having given erroneous results.

(*b*) *Of Acquisition.*

1. We shall gain opportunity of correcting malpresentations as soon as recognised.

2. The capability of early delivery.

3. The opportunity of using the child as a compress in placenta prævia.

4. The capability of version at a time when the old method is impracticable.

5. The opportunity of producing cephalic version much more readily than formerly.

2.—Difficulties in its Performance.

The difficulties we meet with in performing this plan of turning are now to be noticed, and I shall show the manner of combating them at the same time. They will be taken in the degree in which they impede.

The first is, the doubling up of the fœtus upon itself, as is the case in protracted transverse presentations and its varieties; especially where the arm has been in the vagina for a considerable time. If with this state we have a very active uterus, I think we have the most difficult conditions for this form of turning, as indeed for any mode, though much assistance is derived from chloroform; and I would say

that those who have not had the opportunity of frequent practice would do best not to try the above plan, but, as I have before noticed, to depress the breech as much as possible from the exterior, and then to introduce the hand as far as is required to reach the knee, which has generally been brought down by this effort at least half the distance towards the cervix.

The second is, the firm and active contraction of the uterus upon the fœtus.

The merely close apposition of its walls to the fœtus does not of necessity prevent the gliding round of the child, though it adds more or less to the difficulty and requires more care and patience. But when the uterus is contracting continuously round the child, as when it has been rendered irritable by long action by fruitless attempts to turn by the hand within, or by secale, then we shall find the difficulty very great, as will be the case under any plan. Our object will be then to remove or lessen that irritability by appropriate remedies, to effect which I have found no agent more satisfactory than chloroform, inhaled to its full extent. Should it suspend uterine action for only a few minutes, in the majority of cases version may be effected without the hand in the uterus, except in the cases of arm presentation just alluded to.

But I feel certain that the adoption of the mode of version that I am advocating will do very much to diminish the occurrence of these two difficulties. The power of early turning will, by the vigilant practitioner, be made use of, and his cases will not be suffered to pass into the conditions here mentioned. I would say, under favorable opportunities, arm presentations ought to be rare.

The third difficulty to be contended with is the action of abdominal muscles, and the contortions of restless patients.

These can generally be overcome by appealing to the patient's reason; but if necessary she must be placed under chloroform.

The fourth trouble is the exceeding flexibility of the child. This is seldom the case when the labour is at full term; but will be found at the earlier periods from the fifth to the seventh month, especially if the child be already dead, and more so still if it be decomposing. However, this condition is not a real obstacle; a little patience, and variation in the direction of the external pressure, will seldom fail to bring the knee within reach. But this condition is sometimes mixed with the next source of embarrassment, namely,

The fifth is excess of liquor amnii. This, again, scarcely ever will be troublesome at full period, but will be more noticeable about the fifth or sixth month. The child then floats about so easily that it cannot well be seized, and if it is very flexible, there may be some difficulty in hooking hold of the knee, or placing the head at the os. However, this trouble is easily disposed of by rupturing the membranes, and as they flow you can accomplish your desire.

Obesity may hinder, but seldom can be a complete obstacle.

These are the difficulties which have been found to impede the plan I have proposed, and the means of overcoming them. It has been already remarked that, should we fail to be successful with this mode, we can easily have recourse to the old one, for instead of rendering it more difficult, it tends to make it more easy.

However, taking all kinds of cases requiring version together, I think I can promise that it will succeed in fifteen or sixteen cases out of twenty. This, perhaps, is above the ratio in consulting practice, inasmuch as the arm is generally down many hours before seen. I think that those who

have opportunities of seeing malpositions at a much earlier period, and consequently when more manageable than I have, will probably find as great if not greater success. *One rule observe in operating—do it methodically, not confusedly nor hurriedly, lest you lose your points.*

In regard to the risk of metritis after this plan of version, as has been imagined would be the case by some who have heard of it for the first time, I may say, as far as my cases are a guide, there has never been the least indication of it, nor have I heard of it in the practice of others.

If such force is employed as will engender the chances of such a sequel, the operator may be sure that he has not understood the kind of pressure required, nor the kind of motion to be produced.

The reader will probably have gathered from the foregoing that, in bringing before the profession the combined mode of turning, I do not restrict myself entirely to its use; on the contrary, I employ that plan which is the most easy in any given case. Besides this the two plans can be more or less blended according to circumstances, in those cases where the dilatation of the os allows a farther introduction of the hand than merely two fingers. I am quite free to confess that there are a certain limited number of cases (independent of those before mentioned of protracted arm presentations) in which it is very difficult to employ the above plan, and there are some in which the old plan is equally easy, if not really easier. In these cases that plan should be adopted which is the most painless to the patient, most easy in accomplishment, and most adapted to exigencies of the case.

It must be remembered that one of the great advantages of the combined mode is its enabling us to turn at an early stage of labour, or even before labour has set in, before

the pains have become powerful, before the liquor amnii have been discharged. It is at this time that its accomplishment is most easy and certain; while the old plan is most possible when the labour is so far advanced that the combined plan is the more difficult. Still, even then, many cases can be so treated, as will be seen on reference to the illustrative cases.

There are, as every obstetric practitioner knows, cases in which turning by the old plan is impossible, or at least almost so after hours of trial; it must not, therefore, cause disappointment should it be found that this plan is attended at times with difficulty, and occasionally with complete opposition. Still I am sure that its applicability will be found great if employed with care, consideration, and proper comprehension of the principles upon which it is based; for the confirmation of this I need but refer to the experience of those obstetricians who have employed it.* I may here repeat the remark with which I ended my first papers on the subject:—

"In considering the general advantages of this mode of operating over the ordinary method, I disclaim all intention of unnecessarily depreciating that exceedingly valuable and ancient operation—one which has saved numberless lives, and one with which we cannot at present, and probably shall never be able to dispense. Still, if it can be shown that in a considerable number of cases requiring version the operation can be accomplished much earlier, and as quickly or even more so without the necessity of introducing the whole hand into the uterus, I am sure that such an alteration will recommend itself without any panegyric on my part."

* See 'Obst. Trans.,' vol. v, pp. 259—261.

Chloroform.

It remains but to make a few remarks upon the use of chloroform in this operation.

As in most obstetric operations, the use of chloroform is here very marked. The passive condition of the abdominal walls and the temporary suspension of the uterine pains under its influence, render the operation more easy of accomplishment in many cases, while in some it removes obstacles which might occasionally prove insuperable. It is, as will be readily perceived, indicated in cases where there is much irritability and rigidity of the abdominal muscles, or active or continuous uterine contractions. It need not be given always to the fullest extent, and when it is, it is not necessary to preserve the deep coma more than a few minutes.

The rules for the manner of using it are the same as in other cases.

But it must not from hence be inferred that in the above operation it cannot be dispensed with; on the contrary, at least half have been performed without chloroform, and many of these have been amongst my most satisfactory cases.

As a rule, it will be found best to try first without, and then, if any difficulty arise, to administer it.

ILLUSTRATIVE CASES.

I.—COMPLETE PODALIC VERSION.

Placenta prævia.

I may here remark that these cases are only instances of this particular mode of treatment, and not to be quoted in statistics under the general head. Indeed they cannot be quoted fairly in any statistical table, except especial care is taken to place them by the side of or in connection with cases of similar urgency; for it must be seen that this mode is employed in a stage earlier than others can possibly be, excepting those in which the placenta is recommended to be detached; and therefore the severity of the cases are much greater, and requiring more immediate interference, than in those cases where the os, being fully dilated and the placenta only at its margin, the rupture of the membranes is sufficient to ensure the safety of the patient.

For remarks concerning the mode of treatment, see page 26.

Case 1.—*Eighth month of pregnancy; four days' flooding; extreme debility; os size of crown piece, unyielding; placenta three fourths across it; attempts at dilatation; external and internal version; delivery. Lived three weeks.*

Mrs. B—, of Walworth, a delicate, feeble woman, the mother of six children, about thirty-eight years old, and eight months advanced in pregnancy. For the four previous days she had been losing blood in gushes. Her attendant requesting me to see her, I found her, on my arrival, very blanched, pulse thready, very weak, and quick; voice very feeble; altogether in an exceedingly low state from flooding. The os uteri was about the size of a crown piece, thickened, irregular, and unyielding; the placenta presenting three parts across it; the membranes not broken; no pains had appeared; fœtus alive; movements feeble and convulsive; head presenting. Blood was still oozing. I therefore gave her plentifully of spirits and water; and introducing my hand into the vagina, I endeavoured gently to dilate the os. After trying some time with very little effect, I thought it would be a great advantage if I could turn without entering the uterus, and put in practice the method previously described. The head receded to the left side as the breech came down. The shoulders then presented, but in a minute more they followed the head, and then the leg was easily felt through the membranes. Having broken them, I drew the knee into the vagina, and, plugging the os with the leg and breech, and keeping up a slight traction, I waited to allow of further rallying. I also gave a dose of secale, with stimulants, to ensure contraction subsequently. As the os expanded I drew down the fœtus, which was fully born (but dead), in about three quarters of an hour. She did not lose half an ounce of blood during the whole process, nor during the removal of the placenta, which was slightly attached, but not adherent. Had she lost another gush she must have died at the time. However, the quantity already lost had been too much; for, after lingering out three weeks of extreme exhaustion, she died.

This was the first case in which I employed the combined mode.

Case 2.—*Eighth month of pregnancy; os irritable, admitting only two fingers; placenta two thirds over it; external and internal version; recovery.*

Mrs. ——, of Castle Street, Borough; aged about thirty-five; thin, but tolerably healthy; eight months advanced in her eighth pregnancy. During the fortnight previous to my seeing her she had lost blood by gushes and clots, at no time very severe; and about six hours before there was a small gush, with clots, and at the same time the liquor amnii escaped, but no pains followed. I found there was still some bleeding, though not extensive, with clots in the vagina. Her appearance had not been affected by the loss. The os had been dilated to half the full size, but now it was so excessively irritable that upon the slightest touch of the fingers it contracted so that only one and at the most two fingers could enter. The placenta was stretched two thirds across it, posteriorly. It here seemed to me that if the leg and breech of the fœtus could be made to form the plug, the patient would be secure. The only way possible without much risk was to endeavour to put in practice the method before described, which was easily done, though not quite so readily as in Case 1, in consequence of the irritability of the cervix; still it was effected, notwithstanding the prior escape of the waters, without any force or pain, and under circumstances which would have precluded entrance of the whole hand. By means of two fingers in the os I drew down the knee into the vagina; and Mr. Woodman (the senior obstetric clerk) having passed a loop of tape through the bend of the knee, I left the case in his charge, with instructions not to hurry the birth, but to keep up gentle

traction, and thus to plug the cervix. In about three hours the os relaxed and dilated to its full size, when the fœtus was brought down. It had apparently been dead for a day or two. Not the slightest drop of blood was lost during the whole process of turning and extraction, and the woman recovered without a single bad symptom.

CASE 3.—*At full term of pregnancy; copious sudden flooding; os uteri fully dilated; external and internal version easily accomplished.*

Mrs. P—, a fine, healthy person, well made, who had always had rapid labours. At the time I saw her she was at full term of her seventh pregnancy. Having been seized twice within the previous month with a gush of blood (each time about half a pint), she was kept quiet. Twenty-four hours before I saw her she had had the third gush, which had continued ever since. I saw more than a pint, and the nurse said she had lost altogether as much more. At the time of my visit the face was not much blanched, nor was the pulse much affected. The os uteri was fully dilated, the placenta half way over it; uterus perfectly inactive. The liquor amnii had escaped, but the fœtal head was high up; no violent bleeding, but considerable oozing. There can be no doubt that the old method of version would have been very practicable. Still, as every circumstance was favorable, I turned by the method previously recommended, and found it very easily and speedily managed. In about two minutes the foot was in my hand, and drawing the leg through, and the breech to the os uteri, I kept up a gentle traction. No uterine action ensuing, secale was given. In a quarter of an hour pains appeared. After the breech had passed the cervix, finding the funis pulsating, I hastened the delivery, good pains assisting. The child, although not

breathing when born, was soon recovered by artificial respiration. No hæmorrhage appeared during the operation or expulsion of the fœtus. The placenta not being thrown off soon, and a little hæmorrhage appearing, it was removed, being rather firmly attached.

Case 4.—*Ninth month of pregnancy; very severe flooding; os uteri size of shilling; placenta entirely over it; external and internal version easy; recovery.*

Mrs. C—, Borough, aged about twenty-eight, of strong constitution. At about three weeks to completion of full term of her fourth pregnancy. About three weeks before she had been seized, after a fright, with sudden and severe flooding. This passed off till twelve hours before I was called to her, when she was taken with a sudden flooding, nearly equal to a chamber vessel full, accompanied by faintings, which continued during the twelve hours before I saw her. I found her perfectly blanched; pulse very feeble; extremities cold; could still swallow, and had taken about half a pint of brandy. The os uteri was about the size of a five-shilling piece; the placenta protruded, apparently centrally attached, but on carefully searching I found a portion of it thinner at the posterior aspect, and, carrying the finger backwards, I reached the membranes unbroken, the head presenting. Being anxious to have command of the labour with as little shock as possible to the patient in her very low condition, I employed the method mentioned above with so much ease and rapidity, that in about one minute the foot was in the vagina. The membranes in this case were ruptured at the beginning of the version; this, however, made no difference in the accomplishment of it. Continuing to make a plug of the breech, I waited till the system had rallied by stimulants, and in order to allow the os

to expand and the pains to come on. In about an hour and a half the pulse improved, and two doses of secale were given; about half an hour later, gentle traction being employed, the child was born dead. The placenta was expelled by natural efforts. No hæmorrhage occurred after I commenced version. She recovered satisfactorily.

Case 5.—*Eight months advanced in pregnancy; exceedingly severe flooding; extreme depression; os size of crown piece, placenta at its margin; external and internal version; no further hæmorrhage. Died an hour after delivery.*

Mrs. ——, the mother of eight children, about eight months advanced in pregnancy, was taken in the night—seven hours before I saw her—with sudden flooding, which was estimated at more than two quarts. Four hours after she sent for her attendant, who found her with extremities cold, blanched, and lying before the fire. From that time till I saw her she had been losing blood by continuous oozing, considered to be about half a pint. On my arrival, I found her blanched, pulse scarcely perceptible, voice strong, and considerable muscular power. The os was dilatable, about the size of a crown piece, but had not been so more than an hour. The placenta came at that time only to the margin. It had before been felt over the os in part. The liquor amnii had escaped; no pains. As the oozing was still going on, I was anxious to secure a plug. I therefore directed and assisted Mr. Wadkins (the senior obstetric clerk) in performing version by the method above described, which was done in a few minutes. The moment the head rose into the iliac fossa the shoulder presented, and then as instantly the foot was in the hand of the operator. During this time we gave largely of stimulants, and apparently the patient had still considerable power. By the weight of the

arm, traction was kept up against the cervix, and in about half an hour the child was born (but dead), without any hæmorrhage at all. The uterus contracted well, and the placenta came away naturally. Warmth and stimulants were employed, but the pulse began to flag still more, and the powers gradually failed, till, about an hour after, she died, rather suddenly. It seems to me that if the version had been performed as soon as the os was capable of admitting a finger, the draining of blood might possibly have been prevented. The quantity lost at first was not approximately known till after death, and there did not seem any justification for retarding delivery, as has been recommended in extreme exhaustion.

Case 6.—*Seventh month of pregnancy; moderate flooding; os size of crown piece, placenta at edge; external and internal version; recovery.*

Mrs. ——, Lower Bland Street, Dover Road; about thirty-five years old; has had seven children. Being in her seventh month of this pregnancy, she was taken with labour pains about midnight of September 16th, 1861. Two hours after, she had a violent gush of blood, and subsequently two other gushes. The midwife was sent for, and afterwards myself.

I found her, at 7.30 a.m., not particularly reduced, though she had fainted two or three times. The vagina had been plugged, but ineffectually. However, no hæmorrhage had taken place in any quantity. The os, I was informed, a few hours before, was about the size of a shilling, hard, and thick. I found it the size of a crown piece, and yielding; placenta inserted a little over the edge; the membranes perfect. Head presenting. There was still a slight oozing of blood, and as no pains had been felt for some time, I

thought it safest not to treat it by rupturing the membranes, but decided upon turning, and using the breech of the child as a compressor. Placing my hand on the outside of the uterus, I pushed, by the introduction of *four* fingers only into the vagina, the head up towards the right side, as it was inclined to it, and depressed the breech to the left side. Version was accomplished in about two minutes, then, bringing the breech into the os and keeping gentle traction upon it to act as a plug, I gave a dose of secale, and waited for pains. One came on in about a quarter of an hour, expelling the child alive, while a second in about five minutes expelled the placenta. Everything went on naturally; no hæmorrhage occurred throughout the whole delivery, which did not last more than about twenty minutes.

This case presents a good instance of the ease with which version can be effected in this way. There is no question but that the hand could have been introduced through the os within half an hour, and turning so performed; but I presume it will be admitted that the avoidance of it is an advantage in many respects.

Case 7.—*Ninth month of pregnancy; moderate flooding, os admitting only two fingers; placenta three fourths over it; external and internal version; recovery.*

Mrs. ——, two children; a poor feeble woman, in last month of pregnancy. Had irregular bleedings for two or three weeks before; but on the day of my seeing her she had lost a considerable quantity in gushes, whereby she was much reduced. Slight pains had occurred. I found her with feeble and rather quick pulse. Os size of a crown piece, soft, but not yielding; could only just pass in two fingers. Head presenting, but placenta stretched three

fourths across the os posteriorly. There was still some considerable oozing of blood. Version was accomplished by the above method in a few minutes; the foot was at the os. The rigidity of the parietes gave a little difficulty, but steady pressure on the muscles overcame the resistance. I drew down one leg first, but owing to the position of the other leg, close down to the os, it did not effectually plug it, and some bleeding continuing, I brought the other through, and no more bleeding ensued. The same management was adopted as in the former case. The pains came on in less than an hour, and the child was expelled by natural efforts alive in a short time after. The placenta was retained by irregular contractions and adhesions, but after its removal everything did well. Placenta extended from os to fundus. It would have been impossible in this case to have turned in the old way for some time. The child made an excellent plug; not any bleeding occurred after the second leg was brought down.

Case 8.—*At full term of pregnancy; os size of half-a-crown; placenta three fourths across it; severe flooding; external and internal version; recovery.*

Mrs. D—, six children; at full term. Had a severe hæmorrhage two weeks before my visit, without evident cause. Shortly before my seeing her she lost a large quantity of blood in frequent gushes. She was quite blanched, with feeble pulse, 120 per minute. She had been very sick, but this then had passed off. Stimulants were given. I found placenta three fourths over the os; head presenting; os uteri size of half-crown; still losing blood. No labour pains whatever; membranes perfect.

Being anxious to secure her against the risk of further loss, I performed version. I first detached the placenta as

far as the finger could sweep; this liberated the os uteri considerably. I depressed the breech to the left, and head to right, instead of in the opposite direction, because I found the head more on right than left. The version was easily accomplished; a slight difficulty for a moment arising from the patient attempting to strain. As soon as the child was nearly round I ruptured the membranes. As the waters escaped, the child came to hand. I brought down a knee, and the foot was shortly outside of vulva. This was gently drawn down to keep up pressure, so as to plug the os. This it did effectually; not a drop of blood lost afterwards. Having accomplished thus much, and keeping up gentle traction, I waited for the full expansion of os and for uterine action. This not appearing for an hour, I gave secale. In an hour and a half the pains began. Labour then progressed quickly, and in about three hours the child was expelled to the chest; the shoulders being large, some little detention ensued, but the child was born alive. There was hour-glass contraction and hæmorrhage, which required abstraction of placenta; but this ultimately ended well, and she recovered as well as could be expected, considering her former loss.

In this case I should have had to wait a considerable time before I could have introduced my hand into the uterus. During this period much blood might have been lost, which she would have with difficulty borne.

Case 9.—*At nearly full term; placenta at edge of os; membranes perfect; severe hæmorrhage; version by combined mode; recovery.*

Mrs. ——, eighth confinement at nearly full term of pregnancy. Hæmorrhage had been going on for four days before seen. I found her blanched, pulse 120 per minute, and

feeble; the breathing quick and labouring. The bleeding was still going on; the os uteri nearly fully dilated; membranes presenting unruptured; the placenta one third over the posterior portion of the os uteri; the head was presenting. I gave stimulants and egg, and then ruptured the membranes. The funis immediately prolapsed but not pulsating. There was no hope of the head coming down soon, being obstructed somewhat by the placenta, and as she had already lost so much I considered it best to secure against risk of further loss by plugging the cervix with the child. I therefore turned, and succeeded with the greatest ease and celerity by the combined method; the leg was brought down, and the breech detained at the os by gentle traction, and the pains waited for. During this interval the system was well supported, and a dose of secale given. In about half an hour the pains came on with vigour, and the child was expelled by them with very gentle assistance. The placenta followed shortly; no hæmorrhage succeeded; the uterus contracted well. The whole operation was completed in less than an hour, but without any force.

Case 10.—*At seven and a half month of pregnancy; placenta three-quarters over the os; severe hæmorrhage; version by combined mode; recovery.*

Mrs. —, æt. 42, 11 children, in the seventh and a half month of pregnancy. For two weeks before had been attacked with severe hæmorrhage every three or four days. Some hours before I saw her she had an exceedingly severe loss, and blood had been oozing ever since. The os was the size of half-a-crown, placenta nearly wholly over it. The child's head presented, no uterine action had been felt; the vagina was filled with a large clot which was removed. Mr. Phillips, senior obstetric clerk, performed version under

my direction, by the combined use of the outer and inner hand; first of all, the placenta was detached a short distance round the cervix, which released it considerably; the inner hand was especially useful in pressing up the head, which glid up quickly above the brim by the internal pressure, and was easily moved by the external hand to the fundus. The membranes were then ruptured, and the knee found at the os; it was drawn down, and the foot retained just outside the vulva by gentle traction. No hæmorrhage ensued whatever. Stimulants were given, with secale, and the pains waited for. After two doses of secale and a lapse of two hours, pains set in, and the child delivered in two hours after the turning. The placenta came away well, the uterus contracting as usual afterwards. The child was born dead. It was uncertain when it had died; before and about the version it was spasmodically convulsed; there was no sign of pulsation in the funis when it came within the earliest reach. The child's surface was quite anæmic, and probably it was in a dying state about the time of version. The funis was not pressed upon before it was discovered to have been pulseless. Scarcely a drop of blood was lost during or after the operation. She recovered well.

Podalic Version in Accidental Hæmorrhage with Head Presentation.

Case 11.—*Accidental hæmorrhage; excessive loss; transfusion; slight improvement; version; death.*

This was a case in which so much blood was lost before labour began, that ultimately transfusion was adopted, with such a rallying of the pulse that, as hæmorrhage was reappearing, I thought it advisable to deliver whilst I had opportunity. I at first tried the long forceps, the os being

fully expanded, but the introduction of the first blade being attended with some risk, owing to the difficulty of insinuating it between the head and flabby os uteri, that I turned most readily by the above method, only half a minute being required in the act of version. After a short time delivery was accomplished, but the powers were so reduced that she died half an hour after.

Podalic Version in Convulsions in Head Presentation.

Case 12.—*Convulsions; seventh month of pregnancy; podalic version; recovery.*

Mrs. H—, æt. 33, in the seventh month of the fourth pregnancy. Her history is briefly this. In the first confinement she had one convulsion—child born alive. In her second she had none—child born alive. In the third pregnancy, at the seventh month, she was seized with incessant convulsions, for which chloroform was given with benefit. The convulsions continued for four hours till after the birth of the child, which was dead. She quickly recovered.

On this fourth occasion I was called in consultation to see her, about two hours after the first convulsion. She had had five in the interval, snoring between. She had, however, just become conscious. Her pupils were natural, and pulse full; albumen was found in urine. There were no pains. The os uteri showed only a slight indication of dilatation.

A few leeches had been applied to the head, with ice afterwards. Purgatives administered, and mustard plasters applied to the legs. As she seemed improving I did not think it necessary to interfere with the uterus, advising that

the same line of treatment should be adopted, unless the case became worse.

I was called to her again after ten hours. About seven convulsions had occurred during the interval of my visits. She was then quite insensible between each; pupils variable, pulse about 80 per minute, rather full. The os uteri had dilated so as to allow one finger to enter, and reach the head. The child was living; the membranes perfect. Considering that it would be advisable to empty the uterus as soon as practicable, I saw that it would be very desirable if I could gain hold of the foot, by which advantage could be taken of the earliest expansion of the os, and the dilatation increased by gentle traction on the leg. To effect this, I pushed, with the finger in the os, the head upwards to the left side, and the breech downwards towards the right side, from the outside, by the right hand on abdomen. In a minute or two the foot was at the os, but it could not as yet be brought through with one finger alone. It was retained there by gently pressing it against the os, and after some time, when two fingers could pass through the os, the foot and leg were drawn into vagina, which operation was facilitated by pressure of the hand outside, just above the pubis, which acted very easily upon the leg. Having arrived at this point, I waited for the more perfect dilatation of the os, assisting the process by gentle traction, such as the weight of the arm in part would produce. In about two hours the breech passed, when good pains coming on the child was wholly born in about half an hour more. The rest of the delivery was natural. The child was dead.

During the time occupied in waiting there were two convulsions of short duration. All the time she lay in a state similar to that produced by chloroform. Her consciousness returned next day, and she recovered very favorably.

In this case I have no doubt but that I was able to deliver at a period much earlier than I should have been had labour gone on unassisted—a point of importance where deep stupor is present, and where the patient has already been the subject of convulsions. The whole operation was easy, but required patience to wait the dilatation of the os. I much regretted at not having any artificial dilating bags. However, in their absence I found the leg and breech of much service in dilating.

Podalic Version for Coarctation of Brim with Head Presentation.

If we wish to produce podalic presentation in those cases of diminution of the conjugate diameter either at full term or prematurely, it will be found a great advantage to accomplish the change of fœtal position before the labour pains have become active. For this end the combined method has been found by myself exceedingly useful.

The induction of premature labour can be deferred to a later period in pregnancy if podalic delivery is intended, because of the advantage which traction in that direction gives us, as has been ably shown by Dr. Simpson. To turn at the same time as the operation for the induction of premature labour is undertaken, will save much trouble both to patient and the physician. This in almost every case is easy of accomplishment, by first dilating the os uteri with the elastic bags to the required size, then by the combined method performing version, bring the leg in vagina as far as practicable. The patient can be allowed to rest after taking a dose of secale to excite pains, and the case treated as one of ordinary footling presentation. I believe from what I have seen of the effect of this mode of treat-

ment, that in the majority of cases the uterus will very quickly respond, and that the expulsion of the child will be completed in a few hours at the outside. In some of my cases this took place within an hour after turning was effected—in one case within two hours after the first commencement of the dilatation. However, there can be no doubt of this, that instead of dilating alone or rupturing membranes alone, both these are combined with version and a dose of secale, the labour is terminated within a very short space of time, and, as far as I have observed, without extra risk to the mother, certainly with greater advantages to the child, provided we do not use force to extract it.

These remarks it will be seen strongly support the statements of Dr. Barnes, who states he is able to name the time not only for the induction but for the completion of premature labour. This mode of induction could only have been undertaken but for the introduction of the dilatation of cervix by the elastic bags, and by the combined mode of version.

Case 13.—*Coarctation of the brim; labour two days' duration; liquor amnii escaped twelve hours; version by external and internal mode; recovery.*

Mrs. ——, who had had two premature labours before, had in her third pregnancy been in labour for two days when I saw her. The head, after about one third entering the brim during each pain, remained for about ten hours in nearly the same position, with slight overlapping of bones and a scalp tumour. The os uteri was at that time fully dilated, but the anterior lip, being very low, was pressed between the head and the brim; the membranes had ruptured about twelve hours before. She was becoming very

exhausted, with brown furred tongue, and it was evidently imperative to do something. To apply the forceps would have been attended with great risk, and wishing to give the child a chance, if but remote, I determined on turning, which probably would be attended with less hazard to the mother, provided I could do it without passing the hand into the uterus. It was attempted very carefully, without chloroform at first, but finding the uterus clasped the child tightly, I gave it. Very little of it was needed, for as soon as torpor came on, the uterus became passive, and version was effected in a short time upon the plan described. In this case I found that pushing the head aside alone had no effect in bringing the breech down; it required the pressure of it upwards from the exterior as soon as it was raised from within, combined by the pressure on the breech, to secure the alteration of position. However, that was by no means a difficult task, and the foot was in the vagina in a few minutes. The head gave much difficulty while passing the brim, but eventually it was delivered without perforation. The child consequently died before birth, the head being rather above the normal size. The mother recovered without a bad symptom.

Case 14.—*Coarctation of the brim; labour two days' duration; liquor amnii escaped about four hours; version by external and internal mode; recovery.*

Mrs. ——, a small, rickety woman, æt. 27, had had two labours before; the first very tedious, child dead; the second also tedious, child alive. When I was called to her, she had been in slow labour a day and a half, and in active pains for eight or ten hours. The os was fully dilated, and the liquor amnii had escaped for four hours. The pains at

the time were very strong and urgent, but failed to have any effect on the head, which had never fairly entered the brim; consequently the bones could not have been compressed. She was becoming much exhausted; tongue brown and dry, pulse above 100. The child was still alive. The question arose therefore, Was it possible to avert the perforation? To have applied forceps would have been very hazardous to the mother. The choice rested, consequently, between perforation and turning. The latter seemed the more indicated; for, first, she had a living child at full term; therefore the obstacle at that time was not extreme. Secondly, it was possible that the head had never been fairly applied to the brim. Thirdly, if there be a greater facility for the passage of the head by breech delivery, it might possibly in this instance be successful in saving the child. When she was placed under the influence of chloroform, the principal part of the pains subsided; and then by pressure on the breech at the fundus externally the knee was brought down within reach and secured, although in this case the hand was *partially* introduced through the os. The head, however, on reaching the brim, would not pass through till after much time had elapsed, and then only by perforation through the occiput and mouth. The bones were highly ossified, without the slightest attempt at overlapping; had they been naturally yielding, the result would in all probability have been different.

These last two cases, albeit unsuccessful as to the life of the child, prove the possibility of effecting version by the new method even after the evacuation of the liquor amnii. Although, under chloroform perhaps the old plan would have been equally possible, and perhaps equally rapid, yet it will, I think, be admitted, that if we can turn without the presence

of the hand in the uterus, or by the introduction of only a part, the advantages I have enumerated at the end of this paper will have been gained. These cases form a severe test, and are nearly the most critical that can be applied to it. I purposely avoid entering into the interesting question as to the advantages, or the contrary, of version over perforation in these cases.

Case 15.—*Tumour in cavity of sacrum; craniotomy in former labour; version and delivery; recovered.*

Mrs. B—, æt. 25; second confinement. In the former a tumour was found obstructing the passages extending from tip of coccyx upwards for about three inches and laterally so as to occupy the posterior half of the cavity of the pelvis, diminishing the antero-posterior diameter to nearly half. It was situated behind the rectum; forceps were at that time applied, but they were found to bring down the tumour before the head, thereby causing it to bulge and still further impede. The tumour was then punctured, but it was found to be solid, semi-elastic generally, but rather cartilaginous in one part. Craniotomy was then resorted to, and delivery effected after considerable difficulty. She was recommended to have labour induced prematurely, but neglected the advice, and was in early labour when I saw her. I now determined to try podalic presentation, and having placed her under chloroform, version was performed by the combined method and a foot brought down. Chloroform was removed, a dose of secale given, and the pains, which had nearly subsided, waited for. They very soon returned, and in about forty minutes the body was born, but the head gave some little trouble in passing the tumour, thereby causing too long a pressure on the funis; the child therefore was still-

born. The force required to bring it away was not at all severe after the arms were down, and the operation was infinitely easier than the craniotomy in the former labour.

The mother recovered rapidly without a bad symptom.

Case 16.—*Coarctation of brim; craniotomy and forceps in former labours; induction of premature labour and version; child alive; recovery.*

Mrs. ——, about thirty-five years old. Her first two children were born alive, but they were very small; the third was delivered by craniotomy; the fourth alive by myself by forceps. Labour was recommended to be induced at eighth month, but was deferred by the patient till nearly full term. I however considered it wise to forestall even a small period and to institute podalic presentation, moreover to perform version while the uterus was quiet. To effect this I dilated the os uteri by the elastic bags, and in a quarter of an hour had introduced the largest size. This I allowed to remain in the cervix, and left her for an hour. On my returning the os was found large enough to admit of the ready entrance of three fingers or more. I therefore effected version under chloroform by the combined method, ruptured the membranes, and brought a leg into vagina. Chloroform being suspended, as soon as consciousness returned pains began to come on, and within a quarter of an hour all the body was in vagina. The uterus being active I drew the head through the contracted brim, and the child was born alive. The head was detained about four minutes in the conjugate diameter, and required rather firm traction to bring it through. The rest of labour terminated naturally, and the patient made an excellent recovery; the child also did very well. The whole time

occupied from commencement of dilatation to the end of the delivery was only two hours and a half.

Podalic Version for Prolapse of Funis in Head Presentation.

Case 17.—*Funis presentation; version by external and internal method; child delivered with heart beating, but did not breathe. Mother did well.*

Mrs. ——, in her fourth pregnancy. All the former children have died in the birth. She was of healthy appearance. When I saw her she had been in slow labour thirteen hours. The os was fully dilated; the membranes perfect; through which the funis could be felt subject to pressure between the head above and the brim. During every pain the pulsation in it ceased, and as the head had not fairly entered the brim, the chances of the child's escaping death seemed remote, and I therefore decided on version. This was performed in a few minutes by the senior obstetric clerk, Mr. Trewman, by the new method, without the slightest difficulty. At the end of the version the membranes gave way, and the foot entered the vagina. The case then went on as is usual in such instances. The funis ascended out of the way, and the child was born about an hour and a half after the turning, its heart still beating, but respiration could not be induced. The patient was astonished on being told, after the version was over, that the child had been turned within her, so little pain did it produce.

II.—CEPHALIC VERSION IN TRANSVERSE PRESENTATION, ETC.

CEPHALIC VERSION IN TWO CASES OF ARM PRESENTATION, FUNIS PRESENTING; REDUCTION OF THE PROLAPSE. CHILDREN BORN ALIVE.

CASE 18.—*Transverse presentation; funis presenting; cephalic version; child living.*

Mrs. ——, a healthy woman, had had five labours before, one having been breech and one a shoulder presentation. The os was fully dilated; membranes perfect; pains moderate. No part of the fœtus could be found presenting till the whole hand had entered the vagina, and then the finger only impinged on a hand, the funis resting on the membranes. Under these favorable circumstances I determined to try cephalic version, which was readily effected by pressing down the head on the left side from without, in the direction of the os, at the same time rupturing the membranes. The head then entered the os, but the funis became prolapsed. This was, however, replaced above the head, in which situation it was retained by keeping pressure on the head by the hand externally till the uterus contracted itself around the child in its new but natural position, and from the outside by pressing the breech to the fundus, and applying a bandage externally to retain it steadily there, the case proceeded naturally, and a living child was born in about an hour and a half. There was at first some little difficulty in retaining the funis about the head, but by the careful management of Mr. Ninnis, the senior obstetric clerk, it was kept up by the outward pressure till the head had fairly entered the os, after which there was no further trouble.

CASE 19.—*Cephalic version from back presentation; funis presentation reduced. Child born alive.*

In consequence of considerable diminution of the conjugate diameter of brim, which had caused very difficult labours and operative interference, labour was induced by sponge tent at the seventh month of pregnancy.

Twenty-nine hours after its introduction, pains came on with slight dilatation of the os. About thirty-six hours after, it was about the size of a crown piece. At this time the membranes ruptured. The back of the thorax was then found to present, and I was summoned to her.

Passing the left hand into the vagina, and placing the other externally on lower part of abdomen, I was able to make out the head, lying towards the right side. By pressing it downwards from without, it impinged upon the two fingers within the os, and thus the head could be moved about at will, and was placed at the os uteri. It was then observed that the funis had passed down by the side of the head; I instantly replaced it by the internal hand, and pressed the head into the os with the outer hand, which was done with great ease. By continuing the pressure for half an hour, the funis was kept permanently up, and the head remained firmly in the natural presentation.

The pains had become feeble, and secale was given without any result; and as she showed decided symptoms of exhaustion, I advised the use of the long forceps, which was carefully done by Mr. Cann, the senior obstetric clerk. A slight traction sufficed, and the child was born alive. The uterus contracted well afterwards, and the placenta came away without trouble. The mother recovered well. The child lived two weeks.

If these cases are compared they will be found very similar.

In both the children were born alive, in both the funis came down by the head. In both the funis was returned, and the head pressed from the outside so as to fill up the os, thereby preventing further descent of the funis. These cases seem, in this latter respect, to give us a practical hint, which is worth attention—I mean in reference to funis presentations. A considerable number of these cases, at least in their early stages, are troublesome in consequence of the intermittent nature of the labour pains; the funis falling directly the pain ceases to press down the head into the os. In some, however, it is different, the funis being driven down during a violent pain. It is not to these, but to the former class, that the pressure of the hand on the head from the outside is so peculiarly applicable, being in fact a substitute for the natural pains during their recession.

I believe the treatment just related will be found a sure and simple method in the early stage of prolapse of the funis.

Cephalic Version, changed to Podalic in Arm Presentation.

Case 20.—*Arm presentation, with great exhaustion; cephalic version first induced, risk in waiting; changed to podalic presentation.*

Mrs. W—, Broadwall, Lambeth, in her seventh confinement at full term. She had suffered much from privation. Had been about seven hours in labour, with much want of power, and quick pulse, and she seemed very ill. I found that the arm and thorax had been pressed down into pelvis. The pains were not at all powerful, and I was able by gentle efforts to replace the thorax into the uterus, and

then by external assistance I placed the head in the os. However, I found that when I lifted the thorax off the os uteri, that dark blood flowed by the side, which had evidently been effused for some time, and there appeared to be more in the uterus. When I had placed the head in its natural position, which was very easily done, she seemed not strong enough to complete labour without risk, and as there were signs of the death of fœtus, I thought it best not to wait; therefore bringing the feet down, I delivered her, pains assisting at the end. The placenta had been evidently detached for some time, it was quite loose, and there had been a little oozing internally, but not enough to produce any loss of colour in the face.

Pleurisy came on the same evening, with symptoms similar to influenza, and she died on the third day.

These three cases show that it is not difficult to change arm into head presentation, and I have no doubt but that had the condition of the last patient given me time to wait, labour would have been completed in the natural manner, though when the child is known to be dead from unmistakable signs, it is not worth while to detain delivery, but it is best to deliver it by the foot.

III.—PODALIC VERSION IN TRANSVERSE PRESENTATION, ETC.

Case 21.—*Arm presentation; cephalic version tried without success; podalic adopted with ease.*

Mrs. V—, New Kent Road, had had six children; her pelvis was ample. I found the os uteri nearly fully dilated, the pains about five minutes apart, not strong; but the os contracted rather tightly. The left arm of child was in the vagina up to the shoulder, and the head to the right side. The liquor amnii had escaped for a whole day.

I pushed up the arm into the uterus with the left hand, and with the other on the outside pressed the head down into os. However, from the active state of uterus, the face had a strong tendency to present, which continuing would have retarded delivery. I thought it best to deliver by foot (as it was not likely to be more disadvantageous to the child), which I effected by transferring the outer pressure to the breech of the child; after a short time the knee came down to the os; and as soon as I had pressed up the shoulder, which had a great tendency to be forced down, I delivered her of a living child. The patient recovered excellently.

In this case, no doubt I should have been more rapid had I chosen podalic presentation at first. It is not here the place to enter into the relative advantages of one presentation over the other, nevertheless it seems to be best, things being equal, to place the child into its most natural position for delivery. This case also shows that when the child is transversely placed, cephalic or podalic version may be produced at will.

Podalic Version in Arm Presentation.

Case 22.—*Hand and funis presentation; version.*

Mrs. V—, æt. 27, a delicate woman, always having had some irregularity in her presentations, was visited in her

seventh confinement, five hours after labour had commenced, by the obstetric clerk, Mr. Davy, who found the hand and funis presenting. The case requiring version, Mr. Davy decided upon the podalic form. Chloroform having been given, Mr. Davy depressed the breech from the exterior, bringing the inferior extremity down to the os readily. The child was treated as usual in footling cases, but its life was not saved.

CASE 23.—*Shoulder Presentation; podalic Version.*

Mrs. ——, admitted into Mary ward in April, 1861. The antero-posterior diameter of pelvic brim measured only two inches and one eighth, which had caused her labour to be accomplished with the greatest difficulty; embryotomy being employed on the last occasion, although brought on at the seventh month.

Labour was induced on 13th April last, in the seventh month of this her fourth pregnancy, by puncturing the membranes. Pains came on in about sixty hours, after which they continued to increase for twenty-four hours, at intervals of five minutes. The os uteri was then about the size of half-a-crown, still unyielding, scarcely admitting two fingers. The liquor amnii still existed in small quantities, draining slowly away. The shoulder presented, the head being to the right side, the breech to the left, but both approaching the fundus, the child being somewhat doubled in itself.

As it was of much importance to rectify the presentation before the os dilated, so that the presenting part might not be driven lower down; and as the footling presentation seemed, with so narrow a brim and a small soft head, to give the best chance for the life of the fœtus, I decided on attempting podalic version. The patient was put under the

influence of chloroform. The left hand was introduced into the vagina, with two fingers through the os, and the presenting part pushed in the direction of the head, while the right hand pressed down the breech from without. The fœtus did not glide round in the uterus very easily, for it was tightly clamped by it, and every movement within or without produced uterine action, consequently it required a little patience; but by varying the position and direction of the outside pressure, the foot was at last drawn into the os by two fingers. The chloroform was discontinued, and after about half an hour, slight expulsive pains appearing, gentle traction was made upon the child.

It was not long before the os dilated, and the child was brought down during the pains. Some detention of the head took place at the brim, in consequence of the very narrow antero-posterior diameter, and the child's life was lost.

The mother did very well.

Case 24.—*Twins; first delivered by forceps; second, back presentation; uterus tightly contracted round it.*

Mrs. ——, æt. 27, of healthy appearance, though affected with severe dyspnœa; second pregnancy. In the first labour, child removed piecemeal by another practitioner. Had been eleven hours in her second labour, under the care of an experienced midwife, no progress having been made for some hours, although the pains were powerful. I found the head in the cavity of the pelvis, not impacted. After waiting an hour, and her breathing being exceedingly embarrassed, I delivered the first child by short forceps without any trouble. It showed evident marks of compression against its fellow; it had been dead some time. I examined the patient directly, and found another bag of liquor amnii,

which, after considerable effort, I ruptured. The uterus immediately contracted tightly around the second child, the os being of the size of a five-shilling piece, but very rigid. The child presenting by the back, I waited an hour, and finding no disposition to relax nor to hæmorrhage, I gave a dose of opium to lessen the rigidity, leaving her in charge of the midwife. After seven hours, having called again, and finding no relaxation, I examined carefully to find the direction of the extremities, which I was able to do by the angle of the scapula. By pressing the breech from the outside, assisted by the pushing through the os upon the parts of the child, I succeeded in obtaining hold of the lower extremities, after which the labour went on as is usual in such presentations, and she recovered exceedingly well.

The rigid contraction of the whole uterus gave rise to much difficulty in delivery, and was, I suspect, produced by secale. The shortness of breath prevented me from giving chloroform, which generally acts like a charm on the irritated uterus. To have passed the hand fully into that organ would have been hazardous in the extreme. It was a great satisfaction to me to find that the external pressure, combined with the internal assistance, had succeeded in preventing the necessity of further measures, which, in this case, would have been very troublesome and full of risk.

This was a severe test for the operation, the child being doubled up, and the liquor amnii away.

It showed the value of combining both hands, the action of the one coming into operation when the other begins to lose its power; for the inner in this case was almost powerless, while the outer was the principal motor.

APPENDIX.

The following authors are quoted to show how little the subject has been entertained by the English obstetricians.

Smellie, Burns, Denman, Merriman ('Synopsis of Difficult Parturition'), *Collins* ('Practical Treatise'), *Rigby* ('Library of Practical Medicine'), *Murphy* ('Midwifery,' second edition), *Blundell* ('Lectures on Midwifery'), make no allusion whatever to the employment of the external hand in turning.

Dr. Hamilton ('Outlines of Midwifery'), although he states he has brought down the head in arm presentation, yet he evidently had no knowledge of the use of the outer hand.

Dr. Clay takes notice, however, of Wigand's and Martin's writings, and *Dr. Churchill* ('Midwifery,' fourth edition, 1860) alludes to cephalic version of Wigand by external manipulations, and quotes shortly Martin's with those of some other practitioners; he, however, gives no opinion of his own, and appears not to have attempted it.

For *Dr. Simpson's* remarks, already quoted, see p. 20.

Dr. Gooch ('Compendium of Midwifery,' edit. 1831, p. 236) makes no allusion to the use of the outside hand; on the contrary, he states the following:—"Sometimes when the hand or shoulder presents, the head rests on the edge of the brim of the pelvis, and if you return the presenting part the uterus is so stimulated to vigorous action by the introduction of the hand that the head is thrown off the brim of the pelvis, and descends as in natural presentation. I have succeeded in this way in many cases." Otherwise he advises to wait till the os is sufficiently expanded to admit the hand.

Dr. Tyler Smith ('Manual of Obstetrics,' 1858, p. 562), speaking of ordinary podalic version—"While one hand is passing through the os uteri, the other should be laid upon the abdomen, so as to steady the uterus and prevent it being pushed upwards." Again, at page 567, he says, "In some rare cases of transverse presentation it is possible to raise the arm or shoulder and bring down the head, thus effecting what is called cephalic version. In this operation we have to retrace the steps by which the presentation of the head is converted into transverse presentation. The head of the child has to be manipulated by the hand engaged *in utero*, and assisted by the other hand, applied externally, so as to bring it to the pelvic brim, with the vertex directed towards one of the sacro-iliac articulations. After this the case is left to mature. Cephalic version is very much aided by external manipulation, particularly when the uterus and abdominal walls are sufficiently thin to allow of the different parts of the fœtus being readily felt. Cases are recorded, by Martin, of Jena, and others, in which rectification and alteration of malpresentations have been effected by external manipulation alone. In pelvic version

the nates are brought down, but this is a very difficult procedure, on account of the lubricity of the parts, and it is not of very much greater value when effected than podalic version, when one foot only is brought down." This includes all the mention made of the use of the external hand, the podalic version being effected entirely by the introduction of the internal hand.

Dr. Ramsbotham ('Obstetric Medicine and Surgery,' 1856), in speaking of *cephalic version*, p. 367—"But although safest to the child, it is the more dangerous to the mother, as well as the most difficult to the operator; and the danger, as might be expected, is in proportion to the difficulty. The form, size, and slippery nature of the cranium, all combine to produce this difficulty. Even although the shoulder might be raised from the brim, and pushed entirely out of the way, it is no easy matter to grasp the head, so as to bring the vertex over the centre of the superior aperture, and in these attempts, which will most likely require to be repeated, both the uterus and vagina would be seriously endangered. From the danger of the operation, it is now, I believe, entirely abandoned in England as a means of delivery under transverse presentations, although recommended by Dubois as applicable to some few cases." I find no mention at all of the employment of the external hand in the act of version in this work, but later on he says, at p. 518, in discoursing of hand-with-head presentation, "I am perfectly persuaded that most of those cases which we sometimes hear of, where the fœtal hand presented in the vagina, and it was supposed that the shoulder had been raised and the head brought to the pelvic brim, have been mistaken, and that the child did not originally lie transversely, but that the presentation was the

hand by the side of the head. I have myself more than once heard the ease with which this evolution could be effected mentioned, and the superiority of this mode of *turning* over that commonly practised—and which, indeed, I have recommended — strongly insisted on, and I have always suspected some error in the diagnosis, for I know by experience how difficult it is to push up the shoulder and bring the head to the os uteri, when the membranes have been some time ruptured." This last portion of the sentence is the explanation to the opinion expressed above. Had the author ever tried to turn in that manner before the membranes were long ruptured? If so, would he have condemned the diagnosis so readily? No doubt, some cases of arm presentation were originally head and arm, but that does not invalidate the fact that the arm presents, notwithstanding the head be near in the iliac fossa or on the edge of brim.

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